

APPENDIX 3.C-



IAFC Partners with the National Institute of Standards and Technology to Improve Thermal Imaging

Brian Duggan, Fire Chief, City of Northampton Fire Department, MA


During the NIST Thermal Imaging Workshop, The International Association of Fire Chiefs (IAFC) provided extensive user driven input from several fire service perspectives and emphasized the need for imager related training to increase operational safety and ability. Today's thermal imagers were recognized as life saving tools with significant limitations including ergonomics, power supply issues, a high cost that limits use and deployment, and a technology that lacks standardization. Working groups focused on research needs, testing and the development of standards that would facilitate technological growth but set minimum standards for the next generation of thermal imagers.

Reaching beyond the common requests of developing a smaller, cheaper, lighter and less costly imager our partnership with NIST focused on the future evolution of the imager, and explored uses in a wide variety of fire related operations, emergency medical services, and fire prevention. Although it is clear that the larger military and electronics markets limit the ability to develop a fire service specific technology, IAFC emphasized the need to integrate this technology into other systems. This presentation outlined the extensive amount of equipment required to properly outfit today's firefighter.

As this technology is enhanced, the IAFC took a strong position that this evolution needs to be driven by our needs. Priorities for improvement within the realm of imager technology focused upon providing better battery and charging systems, increasing image display quality, transitioning to color displays, providing pattern and hazardous condition alerting, and integration of the imager into a heads up display.





Perspectives on The Evolution of Thermal Imaging





December 9, 2004

Presented by Chief Brian P. Duggan,
Northampton, Massachusetts



Perspectives



Experience Base:

- Fire Chief –
- Graduate Professor –
- Fire Service Instructor
- Author of the NFPA Handbook Information and technology Chapter

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A Great Tool That Has Saved Lives and Increased Effectiveness



Many Uses:

- Structural/urban Search and rescue
- Search for the Missing person
- Detect hidden fire
- Detect malfunctioning electrical equipment



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A Great Tool

Limitations:

- Battery life
- Charging issues
- Calibration and repair issues
- Represents a technological Change, resisted by some

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A Great Tool That Has Saved Lives

Limitations:

- Takes away from traditional operations
- Requires more personnel but those personnel can do more
- Inconsistent deployment



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A Great Tool That Has Saved Lives

Limitations:

- Fiscal resources = price point
- Weight
- Hard to hold
- Another piece of equipment



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Other Perspectives

<u>Fire Instructor:</u>	<u>Graduate Students:</u>
• A training need exists	• Cultural acceptance
• False sense of security	• Operational implementation
• Not utilized to full potential	• Not maximized as a tool



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The Simple View of Improving Thermal Imaging

- Cheaper
- Lighter
- Smaller
- Easier to hold and use

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The Firefighters Challenge

Often times the biggest challenges facing a firefighter as the end user is not the heat and smoke.



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It's Often the Gear Itself





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As Christmas Approaches - Thermal Imager Wish List

- Color Display
- Brighter
- Pattern Alerting
- Integrated

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As Christmas Approaches - Thermal Imager Wish List

- Heads-up display
- Rapid on/off Capability
- Location Transmitter
- Lifetime maintenance free battery




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A Partnership with the Fire Service

- Work together to find a balance that forms technology that is harnessed to provide a use driven tool
- Through standards we need to drive development as opposed to technology driving us.



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Questions ???

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